

In the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

1 1. (Currently Amended) A server for a merchant computer system,  
2 the server comprising:  
3 a file store configured to store a range of audio/video  
4 products in respective product files and client history data, the  
5 client history data ~~including~~ includes a personal client file for  
6 individually identified clients ~~storing~~ and stores past purchasing  
7 records of the client;  
8 a dialogue unit operable to invite and receive a client  
9 selection from among the products, to identify a personal client  
10 file corresponding to the client, and to define a degrade level  
11 signal dependent upon the identified personal client file  
12 containing client history data stored in the file store;  
13 a product reader connected to read the product files from the  
14 file store to generate a digital audio/video signal; and  
15 a signal processing unit having an input selectively  
16 connectable to receive the digital audio/video signal from the  
17 product reader, a processing core operable to apply a defined level  
18 of content degradation to the digital audio/video signal creating a  
19 degraded digital audio/video signal having a degradation in  
20 perceived quality corresponding to the defined degrade level signal  
21 of the dialogue unit, and an output connected to output the  
22 degraded digital audio/video signal.

Claims 2 to 34. (Canceled)

1 35. (Currently Amended) A method of operating a server of a  
2 merchant computer system, the method comprising:

3        inviting a client to make a selection from a range of  
4        audio/video products stored by the server in product files;  
5        receiving a client selection for evaluation of one of the  
6        products;  
7        reading the selected product file to generate a digital  
8        audio/video signal;  
9        storing client history data, including the client history data  
10       includes a personal client file for individually identified clients  
11       ~~storing~~ and stores past purchasing records of the client;  
12       identifying a personal client file corresponding to the  
13       client;  
14       defining a level of content degradation dependent on the  
15       identified personal client file containing client history data;  
16       applying the defined level of content degradation to the  
17       digital audio/video signal to generate a degraded digital  
18       audio/video signal having a degradation in perceived quality  
19       corresponding to said defined level of content degradation; and  
20       outputting the degraded digital audio/video signal to the  
21       client.

Claim 36. (Canceled)

1    37. (Previously Presented) A method of operating a server of a  
2    merchant computer system, the method comprising:  
3        inviting a client to make a selection from a range of  
4        audio/video products stored by the server in product files;  
5        receiving a client selection for evaluation of one of the  
6        products;  
7        reading the selected product file to generate a digital  
8        audio/video signal;  
9        defining a level of content degradation dependent on an  
10       authorization response received by the server from a remote payment

11 gateway computer system following an authorization request by the  
12 server including a client i.d., a client payment instrument and a  
13 monetary value of the product selected for evaluation by  
14 the server transmitting to the client a request for  
15 identification of type of payment authorization,  
16 the client transmitting to the server identification of a  
17 type of payment authorization selected from among a plurality  
18 of differing types of payment authorizations,  
19 defining at the server a level of content degradation as  
20 a function of the identified type of payment authorization;  
21 applying the defined level of content degradation to the  
22 digital audio/video signal to generate a degraded digital  
23 audio/video signal having a degradation in perceived quality  
24 corresponding to said defined level of content degradation; and  
25 outputting the degraded digital audio/video signal to the  
26 client.

1 38. (Original) A method according to claim 35, utilizing a digital  
2 signal processor to apply the defined level of content degradation  
3 to the digital data stream.

1 39. (Currently Amended) A method of communicating between a  
2 client, server and gateway on a computer network, the method  
3 comprising:

- 4 a) the server storing client history data, ~~including the~~  
5 client history data includes a personal client file for  
6 individually identified clients ~~storing and stores~~ past purchasing  
7 records of the client;  
8 b) the client establishing communication with the server to  
9 identify the client and a client payment instrument to the server;  
10 c) the server identifying a personal client file  
11 corresponding to the client;

- 12 d) the server transmitting to the client a range of  
13 audio/video products for supply in return for payment;  
14 e) the client transmitting to the server an evaluation  
15 request for one of the products;  
16 f) the server and gateway communicating to obtain payment  
17 authorization for the requested product from the payment  
18 instrument;  
19 g) the server defining a level of content degradation as a  
20 function of client history stored in the identified personal client  
21 file;  
22 h) the server transmitting to the client a degraded  
23 evaluation version of the selected product without payment  
24 authorization, the degraded evaluation version of the selected  
25 product having a degraded perceived quality corresponding to the  
26 level of content degradation;  
27 i) the client transmitting to the server a payment decision;  
28 j) the server and gateway communicating to effect payment  
29 capture for the authorized payment; and  
30 k) the server transmitting to the client a non-degraded  
31 version of the selected product.

40. (Canceled)

1 41. (Previously Presented) A method of communicating between a  
2 client, server and gateway on a computer network, the method  
3 comprising:

- 4 a) the client establishing communication with the server to  
5 identify the client and a client payment instrument to the server,  
6 the client payment instrument selected from among a plurality of  
7 differing types of client payment instruments;  
8 b) the server transmitting to the client a range of  
9 audio/video products for supply in return for payment;

- 10 c) the client transmitting to the server an evaluation  
11 request for one of the products;
- 12 d) the server and gateway communicating to obtain payment  
13 authorization for the requested product from the payment  
14 instrument;
- 15 e) the server defining a level of content degradation as a  
16 function of said client payment instrument;
- 17 f) the server transmitting to the client a degraded  
18 evaluation version of the selected product without payment  
19 authorization, the degraded evaluation version of the selected  
20 product having a degraded perceived quality corresponding to the  
21 level of content degradation;
- 22 g) the client transmitting to the server a payment decision;
- 23 h) the server and gateway communicating to effect payment  
24 capture for the authorized payment; and
- 25 i) the server transmitting to the client a non-degraded  
26 version of the selected product.

- 1 42. (Currently Amended) A server apparatus comprising:
- 2 means for supplying a range of audio/video products as  
3 respective digital audio/video signals;
- 4 means for storing client history data, ~~including the client~~  
5 history data includes a personal client file for individually  
6 identified clients ~~storing and stores~~ past purchasing records of  
7 the client;
- 8 means for inviting and receiving a client selection from among  
9 the products via a network connection;
- 10 means for identifying a personal client file corresponding to  
11 the client;
- 12 means for defining a level of content degradation as a  
13 function of the identified personal client file;

14 means for processing the digital audio/video signal associated  
15 with the selected product to apply the defined level of content  
16 degradation thereto; and

17 means for outputting the degraded digital audio/video signal  
18 to the network connection, the degraded digital audio/video signal  
19 having a degraded perceived quality corresponding to the defined  
20 level of content degradation, whereby a degraded version of the  
21 selected product is supplied to the client.

1 43. (Currently Amended) A merchant computer system comprising a  
2 server and a client interconnectable over a network, wherein the  
3 server comprises:

4 a file store configured to store a range of audio/video  
5 products in respective product files and client history data, the  
6 client history data ~~including~~ includes a personal client file for  
7 individually identified clients ~~storing~~ and stores past purchasing  
8 records of the client;

9 a dialogue unit having a network connection and operable to  
10 invite and receive a client selection from among the products via  
11 the network connection, to identify a personal client file  
12 corresponding to the client, and to define a level of content  
13 degradation dependent upon the personal client file containing  
14 client history data stored in the file store;

15 a product reader connected to read the product files from the  
16 file store to generate a digital audio/video signal; and

17 a signal processing unit having an input connectable to  
18 receive the digital audio/video signal from the product reader, a  
19 processing core operable to apply a defined level of content  
20 degradation to the digital audio/video signal creating a degraded  
21 digital audio/video signal having a degradation in perceived  
22 quality corresponding to said defined level of content degradation  
23 of the dialogue unit, and an output connected to output the

24 degraded digital audio/video signal from the processing core to the  
25 network connection.

1 44 (Original) The system of claim 43, wherein the client  
2 comprises an audio/video reproduction system operable to play the  
3 audio/video product communicated by way of the digital audio/video  
4 signal.

1 45. (Original) The system of claim 43, the server further  
2 including an output stage operatively arranged between the output  
3 of the signal processing unit and the network connection, the  
4 output stage having a packetizer for sub-dividing the degraded  
5 digital audio/video signal into encrypted data packets and  
6 associating decryption keys with each encrypted data packet, the  
7 dialogue unit being operable to supply a packet decoder to the  
8 client over the network for decoding the digital video/audio  
9 signal, and wherein the client includes an input stage connected to  
10 receive the packet decoder and load the packet decoder into a  
11 decoder host, the client input stage further comprising an input  
12 connected to receive the data packets and supply the data packets  
13 to the decoder host for packetwise decoding by applying the packet  
14 decoder with the associated decryption key of the data packet  
15 concerned, wherein the client input stage is configured to corrupt  
16 the decryption key of any given data packet before the decoded data  
17 of that packet is transmitted from the input stage in a form  
18 playable by the reproduction system.

1 46. (Currently Amended) A method of communicating between a  
2 client, server and gateway on a computer network, the method  
3 comprising:  
4 a) the server storing client history data, ~~including the~~  
5 client history data includes a personal client file for

6 individually identified clients ~~storing~~ and stores past purchasing  
7 records of the client;

8 b) the client establishing communication with the server to  
9 identify the client;

10 c) the server identifying a personal client file  
11 corresponding to the client;

12 d) the server transmitting to the client a range of  
13 audio/video products for supply in return for payment;

14 e) the client transmitting to the server an evaluation  
15 request for one of the products;

16 f) the server defining a level of content degradation as a  
17 function of client history stored in the identified personal client  
18 file;

19 g) the server transmitting to the client a degraded  
20 evaluation version of the selected product without payment  
21 authorization, the degraded evaluation version of the selected  
22 product having a degraded perceived quality corresponding to the  
23 level of content degradation;

24 h) performing steps d) through g) at least once;

25 i) the client transmitting to the server a purchase decision  
26 and payment instrument;

27 j) the server and gateway communicating to obtain payment  
28 authorization for the requested product from the payment  
29 instrument;

30 k) the server and gateway communicating to effect payment  
31 capture for the authorized payment; and

32 l) the server transmitting to the client a non-degraded  
33 version of the selected product.

Claims 47 and 48. (Canceled)



1 49. (Previously Presented) The method of claim 35, wherein:  
2 said step of applying a defined level of content degradation  
3 includes inserting noise into the digital audio/video signal to  
4 degrade signal quality.

1 50. (Previously Presented) The method of claim 35, wherein:  
2 said step of applying a defined level of content degradation  
3 includes:  
4 performing a discrete Fourier transform on the digital  
5 audio/video signal to obtain a frequency domain representation  
6 of the digital audio/video signal;  
7 frequency modulating the frequency domain representation  
8 of the digital audio/video signal; and  
9 performing an inverse discrete Fourier transform unit on  
10 the frequency modulated frequency domain representation of the  
11 digital audio/video signal to reconstruct a time domain  
12 representation of the digital audio/video signal;  
13 wherein the frequency modulating effects a degradation of  
14 perceived signal quality in the reconstructed digital audio/video  
15 signal.

1 51. (Previously Presented) The method of claim 50, wherein:  
2 said step of frequency modulating includes one or more of the  
3 following frequency band rejection, frequency low pass filtering  
4 and frequency high pass filtering to effect a degradation of  
5 perceived signal quality.

1 52. (Previously Presented) The method of claim 50, wherein:  
2 said step of frequency modulating includes phase inversion  
3 over at least one range of frequency components to degrade signal  
4 quality.

1 53. (Previously Presented) The method of claim 50, wherein:  
2 said digital audio/video signal includes a digital audio  
3 signal; and  
4 said step of frequency modulating includes inserting masked  
5 sound contributions adjacent amplitude peaks of the frequency  
6 domain representation of the digital audio signal to degrade signal  
7 quality.

1 54. (Previously Presented) The method of claim 50, further  
2 including the step of:  
3 mixing a signal with the digital audio/video signal before  
4 performing the discrete Fourier transform to effect a degradation  
5 of perceived signal quality.

1 55. (Previously Presented) The method of claim 54, further  
2 comprising:  
3 frequency modulating the digital audio/video signal following  
4 mixing and before the performing the inverse discrete Fourier  
5 transform, the frequency modulating including band-pass filtering  
6 to suppress frequency contributions lying outside a selected  
7 frequency range to effect a degradation of perceived signal  
8 quality.

1 56. (Previously Presented) The method of claim 55, wherein:  
2 said frequency modulating includes inserting masked sound  
3 contributions adjacent the mixing frequency to degrade signal  
4 quality.

1 57. (Previously Presented) The method of claim 35, wherein:  
2 the digital audio/video signal includes a digital video  
3 signal;  
4 the method further comprising:

5 holding frames of the digital video signal in a frame buffer;  
6 and  
7 manipulating frames held in the frame buffer to generate a  
8 degraded digital video signal.

1 58. (Previously Presented) The method of claim 57, wherein:  
2 the digital video signal consists of an MPEG standard video  
3 signal including as frame types I-frames, P-frames and B-frames;  
4 and  
5 wherein said step of manipulating frames includes  
6 identifying the frame type of frames held in the frame  
7 buffer, and  
8 performing frame manipulation of held frames according to  
9 frame type so as to effect a degradation of perceived video  
10 signal quality.

1 59. (Previously Presented) The method of claim 57, wherein:  
2 the digital video signal consists of an MPEG standard video  
3 signal including data blocks, each comprising a plurality of  
4 pixels; and  
5 wherein said step of manipulating frames includes varying the  
6 pixels of the data blocks of at least selected ones of held frames  
7 so as to effect a degradation of perceived video signal quality.

1 60. (Previously Presented) The method of claim 57, wherein:  
2 the digital video signal includes an MPEG standard video  
3 signal including motion vectors; and  
4 wherein said step of manipulating frames includes varying the  
5 motion vectors of at least selected ones of the held frames so as  
6 to effect a degradation of perceived video signal quality.

1 61. (Previously Presented) The method of claim 57, wherein:  
2 the digital video signal consists of an MPEG standard video  
3 signal including objects; and  
4 wherein said step of manipulating frames includes manipulating  
5 the objects of at least selected ones of the held frames so as to  
6 effect a degradation of perceived video signal quality.

1 62. (Previously Presented) The method of claim 35, wherein:  
2 said digital audio/video signal includes a multi-channel  
3 digital audio signal; and  
4 said step of applying the defined level of content degradation  
5 includes switching individual channels within the multi-channel  
6 digital audio signal to apply spatial modification to the digital  
7 audio signal so as to effect a degradation of perceived digital  
8 audio signal quality.

1 63. (Previously Presented) The method of claim 35, wherein:  
2 said digital audio/video signal includes a multi-channel  
3 digital audio signal; and  
4 said step of applying the defined level of content degradation  
5 includes inverting the phase of at least one of the channel of the  
6 multi-channel digital audio signal so as to effect a degradation of  
7 perceived digital audio signal quality.

1 64. (Previously Presented) The method of claim 35, wherein:  
2 said digital audio/video signal includes a multi-channel  
3 digital audio signal; and  
4 said step of applying the defined level of content degradation  
5 includes adding together individual ones of the channels of the  
6 multi-channel digital audio signal so as to effect a degradation of  
7 perceived digital audio/video signal quality.

1 65. (Previously Presented) The method of claim 35, wherein:  
2 said digital audio/video signal includes a multi-channel  
3 digital audio signal; and  
4 said step of applying the defined level of content degradation  
5 includes at least one of removing or attenuating of at least one of  
6 the channels of the multi-channel audio signal so as to effect a  
7 degradation of perceived digital audio/video signal quality.

1 66. (Previously Presented) The method of claim 35, wherein:  
2 the digital audio/video signal includes an n-bit digital audio  
3 signal; and  
4 said step of applying the defined level of content degradation  
5 includes converting the n-bit digital audio signal into an m-bit  
6 digital audio signal where m is less than n so as to effect a  
7 degradation of perceived digital audio signal quality.

1 67. (Previously Presented) The method of claim 35, wherein:  
2 said step of applying the defined level of content degradation  
3 includes time modulating the digital audio/video signal so as to  
4 effect a degradation of perceived digital audio signal quality.

1 68. (Previously Presented) The method of claim 67, wherein:  
2 said step of time modulating the digital audio/video signal to  
3 degrade signal quality includes at least one of:  
4 speeding-up or slowing-down the digital audio/video  
5 signal;  
6 changing in the value of data bits in volume, luminance  
7 or chrominance data contained within the digital audio/video  
8 signal; and  
9 lengthening of a sampling period of the digital  
10 audio/video signal.

1 69. (Previously Presented) The method of claim 35, wherein:  
2 said step of applying the defined level of content degradation  
3 includes  
4 converting the digital audio/video signal into an analog  
5 audio/video signal,  
6 analog processing the analog audio/video signal creating  
7 a degraded analog audio/vided signal having a degradation in  
8 perceived quality corresponding to said defined level of  
9 content degradation, and  
10 converting the degraded analog signal into a degraded  
11 digital audio/video signal for output.

1 70. (Previously Presented) The method of claim 69, wherein:  
2 the analog audio/video signal includes an analog audio signal;  
3 and  
4 said step of analog processing includes frequency domain  
5 modulating the analog audio signal so as to effect a degradation of  
6 perceived audio signal quality.

1 71. (Previously Presented) The method of claim 70, wherein:  
2 said step of frequency domain modulating includes one or more  
3 of band-reject filtering, low-pass filtering, high-pass filtering  
4 and frequency-selective phase inversion to effect a degradation of  
5 perceived audio signal quality.

1 72. (Previously Presented) The method of claim 35, wherein:  
2 said step of applying the defined level of content degradation  
3 includes adding a secondary signal to the digital audio/video  
4 signal so as to effect a degradation of perceived digital  
5 audio/video signal quality.

1 73. (Previously Presented) The method of claim 72, further  
2 comprising:  
3 generating said secondary signal to degrade signal quality.

1 74. (Previously Presented) The method of claim 73, wherein:  
2 said step of generating said secondary signal generates a  
3 noise signal to degrade signal quality.

1 75. (Previously Presented) The method of claim 73, wherein:  
2 said step of generating said secondary signal generates a  
3 content-based audio signal to degrade signal quality.

1 76. (Previously Presented) The method of claim 35, wherein:  
2 said step of adding a secondary signal to the digital  
3 audio/video signal selects a level of the added secondary signal  
4 determined by said level of content degradation to degrade signal  
5 quality.

1 77. (Previously Presented) The server of claim 1, wherein:  
2 the file store stores client history data whereby the personal  
3 client file stores data indicative of a record of prior purchases  
4 of audio/video products following output of a degraded digital  
5 audio/video signal by said signal processing unit; and  
6 said dialogue unit is further operable to define the degrade  
7 level dependent upon the record of prior purchases of audio/video  
8 products.

1 78. (Previously Presented) The server of claim 77, wherein:  
2 said dialogue unit is further operable to define the degrade  
3 level at a first degrade level for clients whose record of prior  
4 purchases of audio/video products following output of a degraded  
5 digital audio/video signal by said signal processing unit is high,

6 at a second degrade level higher than the first degrade level for  
7 clients whose record of prior purchases of audio/video products  
8 following output of a degraded digital audio/video signal by said  
9 signal processing unit is low, and at a third degrade level  
10 intermediate between the first degrade level and the second degrade  
11 level for new clients without a record of prior purchases.

1 79. (Previously Presented) The method of claim 35, wherein:  
2 the step of storing client history data stores client history  
3 data whereby the personal client file stores data indicative of a  
4 record of prior purchases of audio/video products following output  
5 of a degraded digital audio/video signal by said signal processing  
6 unit; and  
7 said step of defining a level of content degradation defines  
8 the degrade level dependent upon the record of prior purchases of  
9 audio/video products.

1 80. (Previously Presented) The method of claim 79, wherein:  
2 said step of defining a level of content degradation further  
3 defines the degrade level at a first degrade level for clients  
4 whose record of prior purchases of audio/video products following  
5 output of a degraded digital audio/video signal by said signal  
6 processing unit is high, at a second degrade level higher than the  
7 first degrade level for clients whose record of prior purchases of  
8 audio/video products following output of a degraded digital  
9 audio/video signal by said signal processing unit is low, and at a  
10 third degrade level intermediate between the first degrade level  
11 and the second degrade level for new clients without a record of  
12 prior purchases.



1 81. (Previously Presented) The method of claim 37, wherein:  
2 the plurality of differing types of payment authorizations  
3 includes at least one selected from the group consisting of credit  
4 card, debit card, electronic cash, electronic check and smart card.

1 82. (Previously Presented) The method of claim 39, wherein:  
2 the step of the server storing client history data stores  
3 client history data whereby the personal client file stores data  
4 indicative of a record of prior purchases of audio/video products  
5 following output of a degraded digital audio/video signal by said  
6 signal processing unit; and  
7 said step of the server defining a level of content  
8 degradation defines the degrade level dependent upon the record of  
9 prior purchases of audio/video products.

1 83. (Previously Presented) The method of claim 82, wherein:  
2 said step of the server defining a level of content  
3 degradation further defines the degrade level at a first degrade  
4 level for clients whose record of prior purchases of audio/video  
5 products following output of a degraded digital audio/video signal  
6 by said signal processing unit is high, at a second degrade level  
7 higher than the first degrade level for clients whose record of  
8 prior purchases of audio/video products following output of a  
9 degraded digital audio/video signal by said signal processing unit  
10 is low, and at a third degrade level intermediate between the first  
11 degrade level and the second degrade level for new clients without  
12 a record of prior purchases.

1 84. (Previously Presented) The method of claim 41, wherein:  
2 the plurality of differing types of payment authorizations  
3 includes at least one selected from the group consisting of credit  
4 card, debit card, electronic cash, electronic check and smart card.

1 85. (Previously Presented) The server apparatus of claim 42,  
2 wherein:

3 the means for storing client history data whereby the personal  
4 client file stores data indicative of a record of prior purchases  
5 of audio/video products following output of a degraded digital  
6 audio/video signal to the network connection; and

7 the means for defining a level of content degradation defines  
8 the degrade level dependent upon the record of prior purchases of  
9 audio/video products.

1 86. (Previously Presented) The server of claim 85, wherein:

2 means for defining a level of content degradation defines the  
3 degrade level at a first degrade level for clients whose record of  
4 prior purchases of audio/video products following output of a  
5 degraded digital audio/video signal to the network connection is  
6 high, at a second degrade level higher than the first degrade level  
7 for clients whose record of prior purchases of audio/video products  
8 following output of a degraded digital audio/video signal to the  
9 network connection is low, and at a third degrade level  
10 intermediate between the first degrade level and the second degrade  
11 level for new clients without a record of prior purchases.

1 87. (Previously Presented) The merchant computer system of claim  
2 43, wherein:

3 the file store stores client history data whereby the personal  
4 client file stores data indicative of a record of prior purchases  
5 of audio/video products following output of a degraded digital  
6 audio/video signal by said signal processing unit; and

7 the dialogue unit is further operable to define the degrade  
8 level dependent upon the record of prior purchases of audio/video  
9 products.

1 88. (Previously Presented) The merchant computer system of claim  
2 87, wherein:

3 said dialogue unit is further operable to define the degrade  
4 level at a first degrade level for clients whose record of prior  
5 purchases of audio/video products following output of a degraded  
6 digital audio/video signal by said signal processing unit is high,  
7 at a second degrade level higher than the first degrade level for  
8 clients whose record of prior purchases of audio/video products  
9 following output of a degraded digital audio/video signal by said  
10 signal processing unit is low, and at a third degrade level  
11 intermediate between the first degrade level and the second degrade  
12 level for new clients without a record of prior purchases.

1 89. (Previously Presented) The method of claim 46, wherein:

2 the step of the server storing client history data stores  
3 client history data whereby the personal client file stores data  
4 indicative of a record of prior purchases of audio/video products  
5 following output of a degraded digital audio/video signal by said  
6 signal processing unit; and  
7 said step of the server transmitting to the client a degraded  
8 evaluation version of the selected product defines a degrade level  
9 dependent upon the record of prior purchases of audio/video  
10 products.

1 90. (Previously Presented) The method of claim 89, wherein:

2 said step of the server transmitting to the client a degraded  
3 evaluation version of the selected product further defines the  
4 degrade level at a first degrade level for clients whose record of  
5 prior purchases of audio/video products following output of a  
6 degraded digital audio/video signal by said signal processing unit  
7 is high, at a second degrade level higher than the first degrade

8 level for clients whose record of prior purchases of audio/video  
9 products following output of a degraded digital audio/video signal  
10 by said signal processing unit is low, and at a third degrade level  
11 intermediate between the first degrade level and the second degrade  
12 level for new clients without a record of prior purchases.